Title (en)
Improved disk log using distributed write

Title (de)
Verbesserter Disk-Log mit verteiltem Schreibsystem

Title (fr)
Disque-log amélioré avec système d'enregistrement réparti

Publication
EP 0899731 A3 20001011 (EN)

Application
EP 98105564 A 19980326

Priority
US 92012097 A 19970826

Abstract (en)
[origin: EP0899731A2] A transaction log stored in a first memory (55) is posted to one of two separate log areas (60, 65), selectively, on a storage system (10) having a plurality of storage media (12) such as disk drives. Posting occurs to a "disk log" area (60) when a page-full status of the first memory (55) transaction log is detected. Alternatively, when a posting request occurs before a page-full status of the transaction log has been detected, then posting occurs immediately to a least busy disk of a "staging log" area (65). Posting occurs to the least busy disk of the "staging log" area by circumventing normal storage system data management and redundancy techniques such that data in the staging log area is not kept redundantly on the storage media. Rather redundancy is maintained by the fact that the transaction log remains with the first memory in addition to being copied to the staging log area. The staging log area includes reserved space on each of the plurality of storage media and is divided into logically separate portions (70, 75, 80, 85, 90, 95, 100, 105) on each of the storage media (12). This prohibits two consecutive "force" postings from overwriting the same portion of the reserved area, regardless of which disk is the least busy. Finally, sequence numbers (120) and disk set numbers (125) are associated with data records (110) that are posted to the disk log areas (60, 65) for enabling recovery of the transaction log data from the disk log areas. <IMAGE>

IPC 1-7
G11B 19/02; G11B 27/00; G11B 27/10; G11B 20/12; G06F 11/14

IPC 8 full level
G06F 3/06 (2006.01); **G11B 19/12** (2006.01); **G11B 20/12** (2006.01); **G11B 27/00** (2006.01); **G11B 27/11** (2006.01)

CPC (source: EP US)
G11B 19/12 (2013.01 - EP US); **G11B 20/12** (2013.01 - EP US); **G11B 27/002** (2013.01 - EP US); **G11B 27/11** (2013.01 - EP US); G11B 2220/20 (2013.01 - EP US); G11B 2220/415 (2013.01 - EP US)

Citation (search report)
- [A] EP 0426354 A2 19910508 - IBM [US]
- [A] US 5481694 A 19960102 - CHAO CHIA-CHIANG [US], et al
- [A] US 5499367 A 19960312 - BAMFORD ROGER J [US], et al
- [A] US 5551003 A 19960827 - MATTSON RICHARD L [US], et al

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 0899731 A2 19990303; **EP 0899731 A3 20001011**; **EP 0899731 B1 20060315**; DE 69833815 D1 20060511; DE 69833815 T2 20061207; JP 4163298 B2 20081008; JP H11119919 A 19990430; US 6055604 A 20000425

DOCDB simple family (application)
EP 98105564 A 19980326; DE 69833815 T 19980326; JP 23586298 A 19980821; US 92012097 A 19970826